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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/420,918	10/20/1999	DAVID E. ROSENSTEIN	COVDP001	3432

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EXAMINER

JUNTIMA, NITTAYA

ART UNIT PAPER NUMBER

2663

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/420,918

Applicant(s)

ROSENSTEIN ET AL.

Examiner

Nittaya Juntima

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/20/1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-24 are pending.

Specification

2. The disclosure is objected to because of the following informalities:
 - “send” in line 5 of page 16 should be changed to “sent.”

Appropriate correction is required.

Claim Objections

3. Claims 9, 11 and 16 are objected to because of the following informalities:
 - “Adapted to” should be changed. For example, “the derived voice over data termination device is adapted to receive and generate...” in lines 4-5 of claim 9 line should be changed to “the derived voice over data termination device receives and generates...” to make the limitation more clear.

It has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In *re Hutchinson*, 69 USPQ 138.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-10, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bossemeyer, Jr. et al. (USPN 6,335,936 B1) in view of Gardell et al. (USPN 6,298,062 B1).

Per **claim 1**, as shown in Fig. 1, Bossemeyer, Jr. et al. discloses a system (a telephone network) providing analog voice telephony to a client premise (telephone subscriber 10), comprising a connection between the client premise and the central office (a subscriber loop 12) wherein the connection carries analog frequencies (analog telephone line carries analog frequencies) (col. 2, lines 55-58).

However, Bossemeyer, Jr. et al. does not explicitly show a derived voice data termination device locating outside of the client premise and connecting to the connection.

As shown in Fig. 2, Gardell et al. discloses a derived voice over data termination device (gateway 32) located outside of the client premise (housed in a central office of the PSTN), said derived voice over data termination device configured to convert between base band signals and derived voice over data signals utilizing derived voice over data technology (col. 4, lines 8-25 and col. 6, lines 28-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a derived voice over data termination device of Gardell et al. into the system of Bossemeyer, Jr. et al. by collocating the derived voice over data termination device in the central office and connecting it to the connection to the client premise. The motivation would be obvious because one of ordinary skill in the art to provide clients/subscribers with a voice over data calling option for cost savings purposes.

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Per **claim 2**, since the derived voice over data termination device (gateway 32 in Fig. 2 of Gardell et al.) located in the central office, therefore, powered by the central office, and connected to the connection to the client premise presents a constant source of line voltage, typically 48 volts, it is inherent that the connection to the client premise is powered by the derived voice over data termination device.

Per **claim 3**, Bossemeyer, Jr. et al. teaches that the connection between the client premise and the derived voice over data termination device is over a single metal wire pair (a twisted pair of copper wires) col. 2, lines 54-58).

Per **claim 4**, as shown in Fig. 19, Bossemeyer, Jr. et al. teaches that a digital subscriber line access multiplexer (DSLAM 576) is coupled between the derived voice over data termination device and one of an ATM switch (an ATM switch inherently located in the ATM network 586).

Per **claim 5**, Bossemeyer, Jr. et al. teaches that the each of at least one port of the digital subscriber line access multiplexer (DSLAM 24 in Fig. 2) is selected from the group consisting of xDSL, DS1, DS3, OC-3, OC-12, Ethernet, E3, E1, and OC-48 (a higher rate digital signal) (col. 6, lines 33-40 and col. 3, lines 65-col. 4, lines 1-4).

Per **claims 7, 9, and 16**, Gardell et al. teaches that the gateway 12 in Fig. 1 provides signal conversion capabilities between a switched circuit network, such as PSTN, and a packet based network (col. 4, lines 8-25).

Given the teaching of Gardell et al., it is inherent that the derived voice over data termination device (gateway 12) is selected from the group consisting of voice over ATM, voice over data network, voice over IP, and voice over frame relay termination devices, all of which

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require signal conversion capabilities between a switched circuit network and a packet based network.

It is also inherent that the derived voice over data termination device receives and generates from base band voice signals packetized digital voice data.

Further, it is inherent that the de derived voice over data termination device supports transmission to one of multiplexer and a switch, such as a circuit switch, and is configured to support transmission utilizing xDSL, DS1, DS3, OC-3, OC-12, Ethernet, E3, E1, and OC-48.

Per **claim 8**, Gardell et al. further teaches that the derived voice over data termination device (gateway 32 in Fig. 2) is located in a wire center (a central office) (col. 6, lines 44-46).

Per **claim 10**, as shown in Fig. 2, Gardell et al. discloses a customer premise equipment (telephone 26) located at the client premise is coupled to the connection of the combined system of Bossemeyer, Jr. et al. and Gardell et al.

Per **claim 15**, Bossemeyer, Jr. et al. discloses a main distribution frame (MDF 26 in Fig. 2).

5. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bossemeyer, Jr. et al. (USPN 6,335,936 B1) in view of Gardell et al. (USPN 6,298,062 B1) and further in view of Sisk et al. (USPN 6,366,644 B1).

The combined system of Bossemeyer, Jr. et al. and Gardell et al. does not teach that xDSL includes ADSL, SDSL, VDSL, HDSL, and RADSL.

Sisk et al. teaches that xDSL includes ADSL, SDSL, VDSL, HDSL, and RADSL.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate different technologies of DSL, disclosed by Sisk et al.,

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into the combined system of Bossemeyer, Jr. et al. and Gardell et al. to accommodate different clients/subscribers' applications and requirements.

6. **Claims 11-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bossemeyer, Jr. et al. (USPN 6,335,936 B1) in view of Gardell et al. (USPN 6,298,062 B1) and further in view of Jones et al. (USPN 6,404,764 B1).

Per **claim 11**, the combined system of Bossemeyer, Jr. et al. and Gardell et al. does not teach that the customer premise equipment receives base band voice signals and digital data signals.

However, as illustrated in Fig. 2, Jones et al. teaches that the customer premise equipment (network premises gateway 10) receives base band voice signals (PSTN 18) and digital data signals (Internet or xDSL 14).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to substitute the network premises gateway of Jones et al. for the telephone of Gardell et al. to allow the clients/subscribers to access different services and protocols of voice and data through one equipment.

Per **claim 12**, as shown in Fig. 2, Bossemeyer, Jr. et al. teaches that the connection of the combined system of Bossemeyer, Jr. et al., Gardell et al., and Jones et al. carries both base band voice signals (analog voice) and digital data signals (digital data traffic) (col. 3, lines 48-51).

Per **claim 13**, Bossemeyer, Jr. et al. discloses that the connection of the combined system of Bossemeyer, Jr. et al. and Gardell et al. includes a plain old telephone service splitter (a splitter 28) (col. 3, lines 51-57).

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Per **claim 14**, Bossemeyer, Jr. et al. further discloses that the connection between the POTS splitter (splitter 28) and the port of a DSLAM (DSLAM 24) carries digital data signals (data traffic output) and the connection between the POTS splitter and the port of the derived voice over data termination device (gateway of Gardell et al. in the combined system) carries base band voice signals (POTS voice signals 32), col. 3, lines 58-64).

7. **Claims 17 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardell et al. (USPN 6,298,062 B1) in view of Bossemeyer, Jr. et al. (USPN 6,335,936 B1).

Per **claim 17**, as shown in Fig. 2, Gardell et al. teaches a derived voice over data packet network, comprising a derived voice over data termination device (the gateway 32) located in a wire center (a central office) and coupled to a client premise (client premise where telephone 26 is located) over a single metal wire pair (a twisted pair of copper wires) (col. 6, lines 28-34 and lines 44-46) and a derived voice over data switch (router 34) coupled to the derived voice over data termination device (the gateway 32) (Fig. 2 and col. 6, lines 28-46).

However, Gardell et al. does not teach a public switched telephone network coupled to a derived voice over data switch.

As shown in Fig. 2, Bossemeyer, Jr. et al. teaches a public switched telephone network (PSTN) connected to a wire center (a central office 20):

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a public switched telephone network of Bossemeyer, Jr. et al. into the network of Gardell et al. for the termination of the traditional voice call in the PSTN.

Per **claim 20**, as shown in Fig. 2, Bossemeyer, Jr. et al. teaches a central office (a central office 20) which includes a digital subscriber line access multiplexer (DSLAM 24).

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8. **Claims 18 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardell et al. (USPN 6,298,062 B1) in view of Bossemeyer, Jr. et al. (USPN 6,335,936 B1) and further in view of Dunn et al. (USPN 6,463,144 B1).

Per **claim 18**, as depicted in Fig. 2, Bossemeyer, Jr. et al. teaches a voice switch (local circuit switch 23).

However, the combined network of Gardell et al. and Bossemeyer, Jr. et al. does not teach a voice gateway.

As depicted in Fig. 2, Dunn et al. teaches a voice gateway (an Internet voice gateway 26).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to connect a voice gateway of Dunn et al. to the derived voice over data switch and a voice switch connecting to the PSTN of the combined network of Gardell et al. and Bossemeyer, Jr. et al. The motivation would be obvious because one of ordinary skill in the art to successfully terminate voice over data in the PSTN by using the voice gateway to convert the voice packets back into the voice signals before forwarding them to the voice switch.

Per **claim 19**, Gardell et al. teaches the regional switching center (regional PoP in Fig. 2).

9. **Claims 21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardell et al. (USPN 6,298,062 B1) in view of Dunn et al. (USPN 6,463,144 B1).

Per **claim 21**, Gardell et al. teaches a method for providing base band voice telephony to a client telephone, comprising:

providing a derived voice over data termination device (gateway 32) in a wire center (a central office of the PSTN) (Fig. 2 and col. 6, lines 28-46 and col. 4, lines 8-25);

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providing a base band analog connection (an analog telephone line connecting between telephone 26 and gateway 32 located in the central office (not shown)) between the client telephone (telephone 26) and the derived voice over data termination device (Fig. 2 and col. 6, lines 44-46);

transmitting base band analog voice signals (PSTN call) between the client telephone (telephone 26) and the derived voice over data termination device (gateway 32) in the wire center (the central office) (Fig. 2 and col. 4, lines 14-17 and col. 6, lines 44-46).

However, Gardell et al. does not teach transmitting derived voice over data signals between the derived voice over data termination device and a voice gateway connected to a public switched telephone network.

Dunn et al. teaches transmitting derived voice over data signals (voice packets) (col. 6, lines 62-65 and col. 8, lines 54-58) and a voice gateway (an Internet voice gateway 26) connected to a public switch telephone network (PSTN) (Fig. 2, col. 5, lines 8-26).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate transmitting of derived voice over data signals and a voice gateway of Dunn et al. into the method of Gardell et al. to enable the clients/subscribers to place voice calls over data network as taught by Dunn et al. (col. 1, lines 17-18 and 22-24).

Per **claim 22**, it is inherent that the base band analog connection (the subscriber loop or local loop) between the client telephone and the derived voice over data termination device located in the central office is over a single metal wire pair, also known in the art as a twisted pair of copper wires

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10. **Claims 23 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardell et al. (USPN 6,298,062 B1) in view of Dunn et al. (USPN 6,463,144 B1) and further in view of Bossemeyer, Jr. et al. (USPN 6,335,936 B1).

Per **claim 23**, the combined method of Gardell et al. and Dunn et al. does not teach a splitter and transmitting digital data signals between a client premise equipment and the splitter over the single metal wire pair.

Bossemeyer, Jr. et al. teaches a splitter (splitter 28 connecting to a subscriber 10 to the central office via the subscriber loop 12 in Fig. 2) and transmitting digital data signals between a client premise equipment and the splitter over the single metal wire pair (the subscriber loop 12) (col. 3, lines 48-50).

Given the teaching of Bossemeyer, Jr. et al., it would have been obvious to a person of ordinary skill in the art at the time the invention was made to add a splitter into the combined method of Gardell et al. and Dunn et al. The motivation would be obvious because one of ordinary skill in the art to be able to separate the voice signals from the data signals for further processing.

Per **claim 24**, Bossemeyer, Jr. et al. further teaches transmitting digital data signals between the splitter (the splitter 28) and a digital subscriber line access multiplexer (DSLAM 24) (Fig. 2 and col. 3, lines 62-64).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1 Determining the scope and contents of the prior art
- 2 Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Cheng et al. (USPN 6,259,708 B1) disclosing the system and method of transmitting voice over DSL and a line voltage source provided by the equipment;
- Liu et al. (USPN 6,081,517) disclosing DSL circuit for digital PSTN and packet network interconnections.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 703-306-4821. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Chau Nguyen can be reached on 703-308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-9408 for regular communications and 703-827-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Nittaya Juntima
November 27, 2002



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